GOVERNMENT OF INDIA
AGRICULTURE
LOK SABHA

UNSTARRED QUESTION NO:1764
ANSWERED ON:04.12.2006
LOSS OF FISH AND SEA FOOD
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Will the Minister of AGRICULTURE be pleased to state:

(a) whether the Government has studied the report by World`s top scientists predicting total disappearance of fish and other sea food by 2048 due to over fishing and excessive pollution of oceans;

(b) if so, the details thereof; and

(c) the steps the Government proposes to take in the matter?

Answer

THE MINISTER OF STATE IN THE MINISTRY OF AGRICULTURE (SHRI KANTILAL BHURIA)

(a) Yes, Sir.

(b) Dr. Boris Worm, Department of Biology, Dalhousie University, Halifax, Canada and others (13) have published a research article entitled `Impacts of Biodiversity Loss on Ocean Ecosystem Services` in the journal, `Science`, Vol. 314, on 3rd November, 2006.

The Scientists analyzed the effects of changes in marine biodiversity on fundamental ecosystem services, by combining available data from different sources ranging from small experiments to global fisheries. These included effects of variations in marine diversity on primary and secondary productivity, resource use, nutrient cycling and ecosystem stability in 32 controlled experiments. Long term trends from 12 coastal and estuarine ecosystems were analyzed.

The authors of the paper observed that systems with higher regional species richness appeared more suitable and records over the past millennium revealed a decline of native species diversity since the onset of industrialization. While analyzing the data from large marine ecosystems (LMEs), the authors observed that 29% of the currently fish species were considered collapsed in 2003. These were species whose catches dropped below 10% of the recorded maximum.

On the other hand, the Scientists have stated that fish diversity varied widely across LMEs, from 20 to 4000 species. With increasing species richness, the proportion of collapsed fisheries reduced and further, the other fisheries increased. The recovery process has been discussed in the paper, that increased with fish biodiversity. the complimentary functional roles of related fish species has also been brought out in the paper. An approach to enhance the recovery is to target other species, offering overfished species a chance of recovery. The role of Marine reserves and Fishery closures in reversing the process of loss of diversity has been analyzed, with positive results in increasing species richness. These increases in biodiversity have been reported to be associated with large increases in fish productivity, up to four times the average catch.

It is clear in the Conclusions of paper that the study was highlighting the societal concurrence of the erosion of biodiversity and that is where they have stated about the possible global collapse of all taxa by 2048, based on extrapolations. However, they also have indicated the limitations of the study and also positive contributions of high diversity systems. An approach for restoring marine biodiversity through suitable fishery population control, maintenance of essential habitats and creation of marine reserves has been indicated to mitigate the problem of reduction in marine biodiversity and productivity.

(c) As regards Indian marine fisheries, there has been an increase in the annual catch from 22.99 lakh tones during 1990-91 to 29.42 lakh tones during 2003-04, though the production has plateaued from 1996-97 onwards at about 29 lakh tones. As many as 57 different groups of marine fish are landed in the country, the large ones being oil sardine, mackerel, Bombay duck, croakers, anchovies, seer fish and different species of prawns and cephalopods.

Both the Union and the State Governments have been implementing the Marine Fishing Policy and the Marine Fishing Regulation Acts incorporating closed seasons (not fishing during monsoon season), mesh size regulations, quota for different classes of fishing vessels, prohibition of juvenile fishes and other measures in coastal fisheries, also in accordance with the Code of Conduct for Responsible fisheries, which have been able to sustain the catches. In order to enhance the fisheries potential, fish aggregating devices (FADs) and artificial reefs are being employed and the programmes of mariculture, sea ranching, and sea cage farming are being taken up. Further, diversified fishing and deep sea fishing are being encouraged with long liners in place of trawlers and Island fisheries development in both Andaman and Nicobar and Lakshadweep islands are being emphasized.

With these in place, the marine fish production is expected to be around 30 lakh tones annually as against the projected potential of

39 lakh tones. Efforts are also being made to concentrate on deep sea fishing to realize and sustain estimated potential in future.